

REMARKS

Claims 1-13, 15-28 and 37 are pending. By this Amendment, claims 4 and 7 have been amended. Entry of the Amendments and Remarks is respectfully requested because entry of Amendments and Remarks places the present application in condition for allowance, or in the alternative, better form for appeal. Based on the following Remarks, Applicants respectfully request that the Examiner reconsider the outstanding objections and rejections and they be withdrawn.

Specification Objection

The Specification has been objected to for failing to provide proper antecedent basis for the claimed subject matter of the non-light emitting zone filling portion having substantially a length of the outermost partition in claim 1.

Applicants respectfully submit that support for the feature may, for example, be found in paragraph [0028] of the original application which states that the non-light emitting zone 31 is formed by filling the non-light emitting zone 21 defined between the outermost partition 22 and the frit glass 22. Thus, in this exemplary embodiment, it is inherent that the non-light emitting zone have terminal ends defining a length in the first direction which is substantially a length of the outermost partition in the first direction, as recited in claim 1.

In another exemplary embodiment, described in paragraph [0039] of the original specification, the non-light emitting zone partially fills a portion of the spaced between the outermost partition 23 and the frit glass space 45'. For example, in this exemplary embodiment, the non light emitting filling portion 61 fills about one-half of the non-light emitting zone 21 by having a width which is about one-half of the non-light emitting zone 21. Thus, in this

exemplary embodiment, the non-light emitting filling portion 61 extends substantially along the length of the outermost partition 23 and has a width which is less than the width of the non-light emitting zone 21.

For at least these reasons, it is respectfully submitted that the original specification does provide proper antecedent basis for the “non-light emitting zone portion ... having terminal ends defining a length in the first direction which is substantially a length of the outermost partition in the first direction”, as recited in claim 1. It is respectfully requested that the objection to the specification be withdrawn.

Rejections Under 35 U.S.C. §102

Claims 2, 3, 28 and 37 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,754,003 issued to Murai, et al. (hereinafter “Murai”). This rejection is respectfully traversed.

With regards to claim 2, page 3 of the Office Action states that Murai discloses a non-light emitting zone filling portion 34 defined between the outermost partition and the sealing material 36 comprising material used for partitions, the outermost partition and the non-light emitting zone filling portion being substantially formed integrally. Applicants respectfully disagree. Applicants submit that nowhere does Murai disclose that the outermost partition 18 (outermost one) and the spacer glass member are substantially formed integrally, as recited in claim 2. Instead, as shown in Figs. 3(b) and 3(c), the spacer glass member 34 and the frit sealing member 36 are in contact with each other. Thus, there is a gap between the outermost partition wall 18 and the spacer glass member 34. For at least these reasons, Applicants submit that Murai

fails to disclose all the features of claim 2. It is respectfully requested that the rejection of claim 2 be withdrawn.

With regards to claim 3, page 3 of the Office Action states that claim 3 essentially recites the same limitations as claim 2 and that Murai discloses the non-light emitting filling zone portion formed integral with the outermost partition fills the space completely between the sealing material and the outermost portion. Applicants respectfully disagree. First, Applicants submit that claim 3 does not recite that the non-light emitting filling zone portion is necessarily formed integral with the outermost partition, as summarized on page 3 of the Office Action. Secondly, nowhere does Murai disclose that the non-light emitting zone filling portion completely fills a space between the sealing material and the outermost partition and nowhere does the Office Action specify what portion or element of the invention disclosed in Murai completely fills the space between the sealing material and the outermost partition. As shown in Figs. 3(b) and 3(c), there is a gap between the spacer glass member 34 and the outermost partition 18. Thus, Murai fails to disclose an element which completely fills a space between the sealing material and the outermost partition. For at least these reasons, Applicants submit that Murai fails to disclose all the features of claim 3. It is respectfully requested that the rejection of claim 3 be withdrawn.

With regards to claim 28, page 3 of the Office Action states that Murai discloses that inert gas is disposed within the discharge chambers in the plasma panel. The Office Action at least fails to identify which portion or element of Murai is a non-light emitting zone filling portion disposed between an outermost one the partitions and the seal so as to prevent a discharge of the first electrodes in a space between the outermost partition and the seal, as recited in claim 28. Applicants submit that the Office Action fails to identify which portion or element

of Murai satisfies these features of claim 28, because Murai fails to disclose such a feature. Further, as discussed above, the spacer glass member 34 is adjacent to the frit sealing member 36 and not the outermost partition wall. Thus, as shown in Figs. 3(b) and 3(c), a gap exists between the spacer glass member 34 and the outermost partition wall and in that space discharge may occur. More particularly, a pair of discharge electrodes 20 in combination with gas in the space below them may result in a discharge and by having a gap between the outermost partition and the spacer glass member 34 the gas in that space may discharge and cause light emission by the discharge gas. Thus, the spacer glass member 34 of Murai which is located adjacent to the frit sealing member 36 is not capable of preventing a gas discharge. Accordingly, Murai fails to disclose a non-light emitting zone filling portion disposed between an outermost one of the partitions and the seal so as to prevent a discharge of the first electrodes in a space between the outermost partition and the seal, as recited in claim 28. For at least these reasons, Murai fails to disclose all the features of claim 28. It is respectfully requested that the rejection of claim 28 be withdrawn.

With regards to claim 37, Applicants submit that Murai at least fails to disclose an outermost one of the partitions extending to the seal so as to prevent a discharge of the first electrodes in a space between the outermost partition and the seal, as recited in claim 37. First, Applicants submit that nowhere does Murai identify or address the problem of mis-discharge which may occur in the space between the outermost partition and the seal. Secondly, nowhere does Murai disclose a partition which extends to the seal. Thus, the outermost partition 18 fails to prevent a discharge. Finally, as discussed above with regards to claim 28, the spacer glass member 34 does not prevent a discharge of the first electrodes in the space between the outermost partition and the seal. For at least these reasons, Applicants submit that Murai fails to

disclose all the features of claim 37. It is respectfully requested that the rejection of claim 37 be withdrawn.

Claims 4, 15 and 16 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,242,859 issued to Betsui, et al. (hereinafter “Betsui”). This rejection is respectfully traversed.

With regards to claim 4, page 5 of the Office Action states that Betsui discloses a non-light emitting zone filling portion 40 (comprising the space after the peripheral partition 23 and the spacer 40) defined between the outermost partition and the sealing material 25 and that the non-light emitting zone filling portion covers the first electrodes formed on the front glass substrate. Applicants respectfully disagree. First, Applicants submit that both the “non-light emitting zone filling zone” and the “non-light emitting zone filling portion” cannot be satisfied by the same element 40 of Betsui. Secondly, Applicants submit that claim 4 recites that the non-light emitting zone filling portion fills a non-light emitting zone and that the non-light emitting zone is defined by the outermost one of the partitions and the sealing material. Thus, the non-light emitting zone is the region between the outermost partition 23 and the sealing material 25. Applicants submit that, as shown in Fig. 10, the spacer 40 does not fill that space as it only fills a portion of that space because it only occupies a portion of the space. Thirdly, Applicants submit that the spacer 40 of Betsui fails to cover an end portion of any of the electrodes. By providing the spacer 40 adjacent to the sealing material, in the portion of the non-light emitting zone, two adjacent electrodes exist and thus, the energy between them may cause the gas to discharge. Instead, by providing the non-light emitting zone adjacent to the outermost partition such that it will cover an end of at least of the electrodes extending beyond the outermost partition wall, the space below a pair of electrodes is filled with the non-light emitting zone filling portion and thus,

prevents mis-discharge. For at least these reasons, Applicants submit that Betsui fails to disclose all the features of claim 4. It is respectfully requested that the rejection of claim 4 be withdrawn.

With regards to claims 15 and 16, page 5 of the Office Action states that Betsui discloses all the same limitations as claim 4 and also the seal 25 disposed such that at least one of the opposing ends of each of the first electrodes is disposed between the seal and the partitions. Applicants respectfully disagree. First, for the reasons discussed above, Applicants submit that Betsui fails to disclose the feature of claim 4. Secondly, Applicants submit that nowhere does the Office Action identify which portion of Betsui discloses that the seal is disposed such that at least one opposing end of each of the first electrodes is disposed between the seal and the partitions. Applicants submit that nowhere does Betsui disclose a seal with all the features recited in claim 15. Further, Applicants submit that Betsui fails to identify and solve the problem of mis-discharge in the non-light emitting zone. Thus, Betsui also fails to provide any solutions for the problem. For at least these reasons, Applicants submit that Betsui fails to disclose all the features of claim 15 as well as all the features of claim 16, which depends from 15. It is respectfully requested that the rejection be withdrawn.

Rejections Under 35 U.S.C. §103

Claims 1, 5, 6, 7-13 and 19-27 are rejected under 35 U.S.C. §103(a) for being unpatentable over Betsui. The rejection is respectfully traversed.

With regards to claim 1, page 6 of the Office Action states that Betsui discloses all the limitations of claim 1 which are similar to those of claim 4. Further, the Office Action explicitly states that Betsui fails to explicitly disclose the non-light emitting zone filling portion having substantially a length of the outermost partition in the first direction. First, Applicants submit

that, as discussed above with regard to claim 4, the non-light emitting zone is the region between the outermost partition 23 and the sealing material 25. Applicants submit that, as shown in Fig. 10, the spacer 40 does not fill that space as it only fills a portion of that space because it only occupies a portion of the space. Secondly, Applicants submit that by providing the non-light emitting zone filling portion having substantially a length as the outermost partition in the first direction, a more uniform internal structure is obtained and the size of the structure is not unnecessarily increased. For at least these reasons, Applicants submit that Betsui fails to disclose all the features of claim 1.

With regards to claims 5 and 6, page 6 of the Office Action states that Betsui discloses a gas exhaust hole 26 on the upper surface of the non-light emitting zone filling portion. Applicant respectfully disagrees. First, Applicants submit that, as discussed above with regard to claim 4, the non-light emitting zone is the region between the outermost partition 23 and the sealing material 25. Applicants submit that, as shown in Fig. 10, the spacer 40 does not fill that space as it only fills a portion of that space because it only occupies a portion of the space. Secondly, Applicant submits that the hole 26 of Betsui is used to introduce discharge gas into the rib region (col. 12, lines 47-49). Thus, the hole 26 of Betsui is on the upper surface of the rear substrate 20 (see Fig. 11 of Betsui) and is not at the upper surface of the non-light emitting zone filling portion. In particular, Applicants submit that no where does Betsui disclose or suggest a hole at the upper surface of the non-light emitting zone filling portion. Instead, Betsui discloses that the spacer 40 is not provided in the region of the hole 26 (col. 12, lines 45-47). Thus, Betsui in fact teaches away from having a hole at the upper surface of the non-light emitting zone filling portion. Thus, Betsui fails to disclose or suggest all the features of claim 5, as well as all the

features of claim 6, which depends from claim 5. It is respectfully requested that the rejection of claims 5 and 6 be withdrawn.

With regards to claims 7-13, Applicants submit that Betsui fails to disclose a non-light emitting zone filling portion being disposed adjacent to the outermost partition and an empty space defined between the sealing material and the non-light emitting zone filling portion, ...wherein the non-light emitting zone filling portion covers an end of at least one end portion of the first electrodes, as recited in amended claim 7. In particular, as shown in Fig. 10 of Betsui, the spacer 40 of Betsui is disposed adjacent to the sealing material 25 and not the outermost partition 25. Applicants submit that the spacer 40 of Betsui fails to cover an end portion of any of the electrodes. By providing the spacer 40 adjacent to the sealing material, in the portion of the non-light emitting zone, two adjacent electrodes exist and thus, the energy between them may cause the gas to discharge. Instead, by providing the non-light emitting zone adjacent to the outermost partition such that it will cover an end of at least of the electrodes extending beyond the outermost partition wall, the space below a pair of electrodes is filled with the non-light emitting zone filling portion and thus, prevents mis-discharge. Thus, because at least an end of one of the first electrodes is covered, any gas in the empty space below electrodes adjacent to that electrode will not discharge. Further, Applicants submit that Betsui fails to identify the problems associated with mis-discharge and thus, fails to provide any solution to the problems. For at least these reasons, Applicants submit that Betsui fails to disclose a non-light emitting zone filling portion being disposed adjacent to the outermost partition and an empty space defined between the sealing material and the non-light emitting zone filling portion, ...wherein the non-light emitting zone filling portion covers an end of at least one end portion of the first electrodes, as recited in amended claim 7. Thus, Betsui fails to disclose or suggest all the

features of claim 7 as well as all the features of claims 8-13, which depend from claim 7. It is respectfully requested that the rejection of claims 7-13 be withdrawn.

With regards to claim 19-27, Applicants submit that for at least the reasons discussed above with regards to claim 15, Betsui fails to disclose all the features of claim 15, from which claims 19-27 depend. Thus, Applicants submit Betsui also fails to disclose all the features of claims 19-27. It is respectfully requested that the rejection of claims 19-27 be withdrawn.

Claims 17 and 18 are rejected under 35 U.S.C. §103(a) for being unpatentable over Murai. The rejection is respectfully traversed.

With regards to claims 17 and 18, page 11 of the Office Action states that claim 17 recites the same limitations as claim 2 and hence is rejected for the same reason. Further, the Office Action states that Murai also discloses the non-light emitting zone portion having a slightly larger height than the partition wall 18 and that it would have been obvious to specify that the height of the non-light emitting zone portion being the same as the height of the outermost partition wall 18.

First, Applicants submit that for the reasons discussed above with regards to claim 2, as shown in Figs. 3(b) and 3(c) of Murai, the spacer glass member 34 and the frit sealing member 36 are in contact with each other. Thus, there is a gap between the outermost partition wall 18 and the spacer glass member 34. Accordingly, the non-light emitting zone filling portion does not prevent a discharge of the first electrodes. In particular, as discussed above with regard to claim 7, by providing the non-light emitting zone adjacent to the outermost partition the space below a pair of electrodes is filled with the non-light emitting zone filling portion and thus, prevents mis-discharge. By providing the spacer glass member 34 adjacent to the frit sealing member, two adjacent first electrodes are capable of discharging the gas in the space thereunder.

Thus, Murai fails to disclose a non-light emitting zone filling portion between an outermost one of the partitions and the seal so as to prevent the discharge of the first electrodes in a space between the outermost partition and the seal, as recited in claim 17.

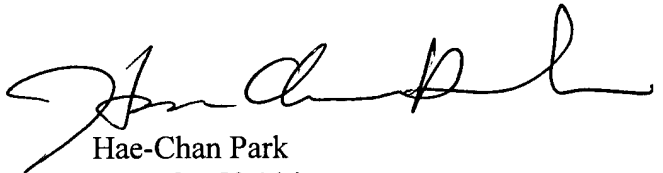
Secondly, Applicants submit that Murai discloses that the spacer glass member 34 be a bit taller than the partition 18 because of the height adjusting layers 32 on the partitions 18. If the spacer glass members had substantially the same height as the outermost partition 18, than the spacer glass member 34 would be much shorter than the resulting height of the combination of the partition 18 and the height adjusting layers 32. Further, in fact in the structure disclosed in Murai if the height of the partion 18 and the height of the spacer glass member 34 was the same, an even larger space is filled with gas and there is a greater risk of mis-discharge. However, in view of the features of the non-light emitting filling portion of claim 17, by providing the non-light emitting zone filling portion with the same height as the outermost partition, the non-light emitting zone filling portion and the partitions may be formed substantially simultaneously. For at least these reasons, Applicants submit that Murai fails to disclose or suggest all the features of claim 17, as well as all the features of claim 18, which depends from claim 17. It is respectfully requested that the rejection of claims 17 and 18 be withdrawn.

CONCLUSION

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete response has been made to the outstanding Office Action and, as such, all pending claims are in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,



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Date: November 3, 2003

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